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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,085	09/18/2000	John E. Bennett	Q858-E	3902

7590

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EXAMINER

HUTTON JR, WILLIAM D

ART UNIT

PAPER NUMBER

3676

DATE MAILED: 06/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/664,085

Applicant(s)

BENNETT ET AL.

Examiner

Doug Hutton

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5-15, 17 and 22-25 is/are allowed.
- 6) ☒ Claim(s) 4, 16, 18-20 and 26 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

✓ The disclosure is objected to because of the following informalities: the reference number "30" on Page 11, Line 27 should be amended to – 16' – because that is the proper reference number; the reference number "30" on Page 11, Lines 29-30 (3 occurrences) should be amended to – 16 – because that is the proper reference number; and the reference number "40a" on Page 12, Line 14 should be amended to – 50a – because that is the proper reference number.

Appropriate correction is required.

Claim Objections

Claims 1, 17 and 21 are objected to because of the following informalities: the term "cover" (Claim 1, Line 8; Claim 17, Line 1; and Claim 21, Line 3) should be amended to – cover means – because that is how the element is previously identified; and the phrase "to free" (Claim 1, Line 10; and Claim 21, Line 5) should be amended to – freeing – so that the claims read more easily.

Claims 1 and 22 are objected to because of the following informalities: the term "detent element" (Claim 1, Lines 2-3 and Line 6; and Claim 22, Lines 2-3) should be amended to – detent – because that is how the element identified in all the other claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 16 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4:

The claim recites the limitation "compressed between *said spacer*" in Lines 1-2. There is insufficient antecedent basis for this limitation in the claim because a "spacer" is not previously mentioned in the claims.

Claim 16:

The claim recites the limitation "further comprising directional markings in *said tabs*" in Line 1. There is insufficient antecedent basis for this limitation in the claim because no "tabs" are previously mentioned in the claims.

Claim 26:

The claim recites the limitation "*said pin* on lower plate" in Lines 10-11. There is insufficient antecedent basis for this limitation in the claim because a "pin" is not previously mentioned in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission), in view of Johnson et al., U.S. Patent No. 6,203,511.

Claim 18:

Admission discloses a hinge for an orthopedic splint comprising:

- an upper plate and a lower plate connected for pivotal movement (see Applicant's Specification – Page 1, Lines 16-19); and
- a detent element supported on said upper plate and displaceable into and out of an engaged condition thereby to lock the two plates against said pivotal movement in a selected angular relationship relative to each other (see Applicant's Specification – Page 1, Lines 23-30).

Additionally, it is well-known in the art to include a spring (74, Figure 4) normally urging a detent (70) into engagement with plates, as demonstrated by Kilbey, U.S. Patent No. 5,814,000.

Admission fails to disclose a pivotal movement comprising an arc including a zero angle position at an intermediate location along said arc, such that said plates may be moved through substantial angular ranges on either side of said zero angle position.

Johnson et al. teaches a hinge for an orthopedic splint (see Figure 1) comprising an arc (54, Figure 4) including a zero angle position (see Figure 4) at an intermediate location along said arc, such that said plates may be moved through substantial angular ranges on either side of said zero angle position (plates 16, 18 each have a 120° slot; slots 54 can be arranged to completely overlap each other, with 60° on one side of the zero angle position and 60° on the other side of the zero angle position – see Column 5, Line 66 through Column 6, Line 20), for the purpose of adjusting the amount of pivotal movement between upper and lower plates.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art to include a pivotal movement comprising an arc including a zero angle position at an intermediate location along said arc, such that said plates may be moved through substantial angular ranges on either side of said zero angle position for the purpose of adjusting the amount of pivotal movement between upper and lower plates, as taught by Johnson et al.

Claim 19:

Admission fails to disclose a zero angle position that is centered along an arc of pivotal movement such that the plates may be pivoted through equal angular ranges on either side of the zero angle position.

Johnson et al. teaches a hinge for an orthopedic splint (see Figure 1) comprising an arc (54, Figure 4) including a zero angle position (see Figure 4) that is centered

Art Unit: 3676

along an arc of pivotal movement such that the plates may be pivoted through equal angular ranges on either side of the zero angle position (plates 16, 18 each have a 120° slot; slots 54 can be arranged to completely overlap each other, with 60° on one side of the zero angle position and 60° on the other side of the zero angle position – see Column 5, Line 66 through Column 6, Line 20), for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art to include a zero angle position that is centered along an arc of pivotal movement such that the plates may be pivoted through equal angular ranges on either side of the zero angle position for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates, as taught by Johnson et al.

Claim 20:

Admission fails to disclose plates that are aligned in a straight line in a zero angle position.

Johnson et al. teaches plates that are aligned in a straight line in a zero angle position (plates 16, 18 each have a 120° slot; slots 54 can be arranged to completely overlap each other, with 60° on one side of the zero angle position and 60° on the other side of the zero angle position – see Column 5, Line 66 through Column 6, Line 20), for

Art Unit: 3676

the purpose of adjusting the position of the pivotal movement between upper and lower plates.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art to include plates that are aligned in a straight line in a zero angle position for the purpose of adjusting the position of the pivotal movement between upper and lower plates, as taught by Johnson et al.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (Admission), in view of Bloedau, U.S. Patent No. 5,938,629.

Claim 26:

Admission discloses a hinge for an orthopedic splint comprising:

- an upper plate and a lower plate connected for pivotal movement (see Applicant's Specification – Page 1, Lines 16-19);
- a detent element supported on said upper plate and displaceable into and out of an engaged condition thereby to lock the two plates against said pivotal movement in a selected angular relationship relative to each other (see Applicant's Specification – Page 1, Lines 23-30);
- a pair of wheels turning concentrically with said pivotal movement of the plates, each of said wheels having a wheel edge engageable by said detent for locking

the wheel relative to said upper plate (see Applicant's Specification – Page 2, Lines 1-9); and

- a stop on each of said wheels operative for limiting pivotal movement of said lower plate relative to said upper plate in one direction of movement (see Applicant's Specification – Page 2, Lines 1-9).

Additionally, it is well-known in the art to include a spring (74, Figure 4) normally urging a detent (70) into engagement with plates, as demonstrated by Kilbey, U.S. Patent No. 5,814,000.

Admission fails to disclose a pin on the lower plate that is disposed between the two stops.

Bloedau teaches a hinge for an orthopedic splint comprising:

- a pair of wheels (44, 44A; Figure 3) turning concentrically with pivotal movement of an upper plate and a lower plate (see Figure 5A), each of said wheels having a wheel edge (46, Figures 5B and 5C) engageable by a detent (32, Figure 4A) for locking the wheels relative to said upper plate;
- a stop (49B, Figure 4B; and 49A, Figure 4C) on each of said wheels operative for limiting pivotal movement of said lower plate relative to said upper plate in one direction of movement; and
- a pin (48, Figure 3) on said lower plate being disposed between two stops (see Figure 5A) such that the range of pivotal movement between the plates may be set by the angular spacing between the two stops when said detent is engaged

Art Unit: 3676

for locking said wheels against rotation relative to said upper plate (Column 1, Lines 35-40),

for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the admitted prior art to include a pin on said lower plate being disposed between the two stops such that the range of pivotal movement between the plates may be set by the angular spacing between the two stops when said detent is engaged for locking said wheels against rotation relative to said upper plate for the purpose of adjusting the position and the amount of pivotal movement between upper and lower plates, as taught by Bloedau.

Allowable Subject Matter

Claims 1-3, 5-15 and 17 are allowed.

Claims 3 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 1:

The prior art fails to disclose or suggest a hinge for an orthopedic splint, comprising:

- an upper plate and a lower plate connected for pivotal movement;
- a detent supported on said upper plate and displaceable into and out of an engaged condition thereby to lock the two plates against said pivotal movement; and
- a cover means protecting said detent against displacement out of said engagement by an unaided hand, said cover means having an aperture that is sized and disposed for admitting a tool end operative for displacing said detent out of said engagement and thus freeing the plates for said pivotal movement.

Claims 2-17:

These claims are dependent upon Claim 1 and thus include allowable subject matter.

Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 21:

The prior art fails to disclose or suggest a hinge for an orthopedic splint, comprising:

- an upper plate and a lower plate connected for pivotal movement;

Art Unit: 3676

- a detent supported on said upper plate and displaceable into and out of an engaged condition thereby to lock the two plates against said pivotal movement; and
- a cover means protecting said detent against displacement out of said engagement by an unaided hand, said cover means having an aperture that is sized and disposed for admitting a tool end operative for displacing said detent out of said engagement and thus freeing the plates for said pivotal movement.

Claims 22-25 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 22:

The prior art fails to disclose or suggest a hinge for an orthopedic splint, comprising:

- an upper plate and a lower plate connected for pivotal movement;
- a detent supported on said upper plate and displaceable into and out of an engaged condition thereby to lock the two plates against said pivotal movement; and
- a locking element removably engageable with said detent for holding said detent out of said engagement thereby to facilitate adjustment of the plates to a desired angular relationship.

Art Unit: 3676

Claims 23-25:

These claims are dependent upon Claim 22 and thus include allowable subject matter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Davis et al., U.S. Patent No. 5,460,599; Morris, U.S. Patent No. 4,982,732; Young, U.S. Patent No. 5,997,493; Young, U.S. Patent No. 6,004,283; and Bennett et al., U.S. Patent No. 5,873,847.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doug Hutton whose telephone number is (703) 305-1701. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached at (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

Application/Control Number: 09/664,085

Page 13

Art Unit: 3676

WDH

June 7, 2002

A handwritten signature in black ink, appearing to read "Anthony Knight", is written over the printed name.

ANTHONY KNIGHT
SUPERVISORY PATENT EXAMINER
TECH CENTER 3600